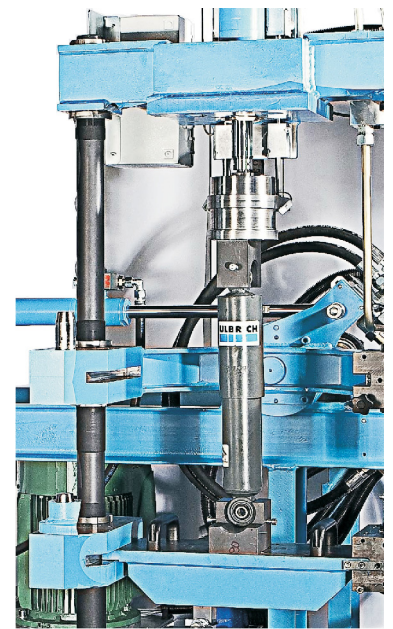
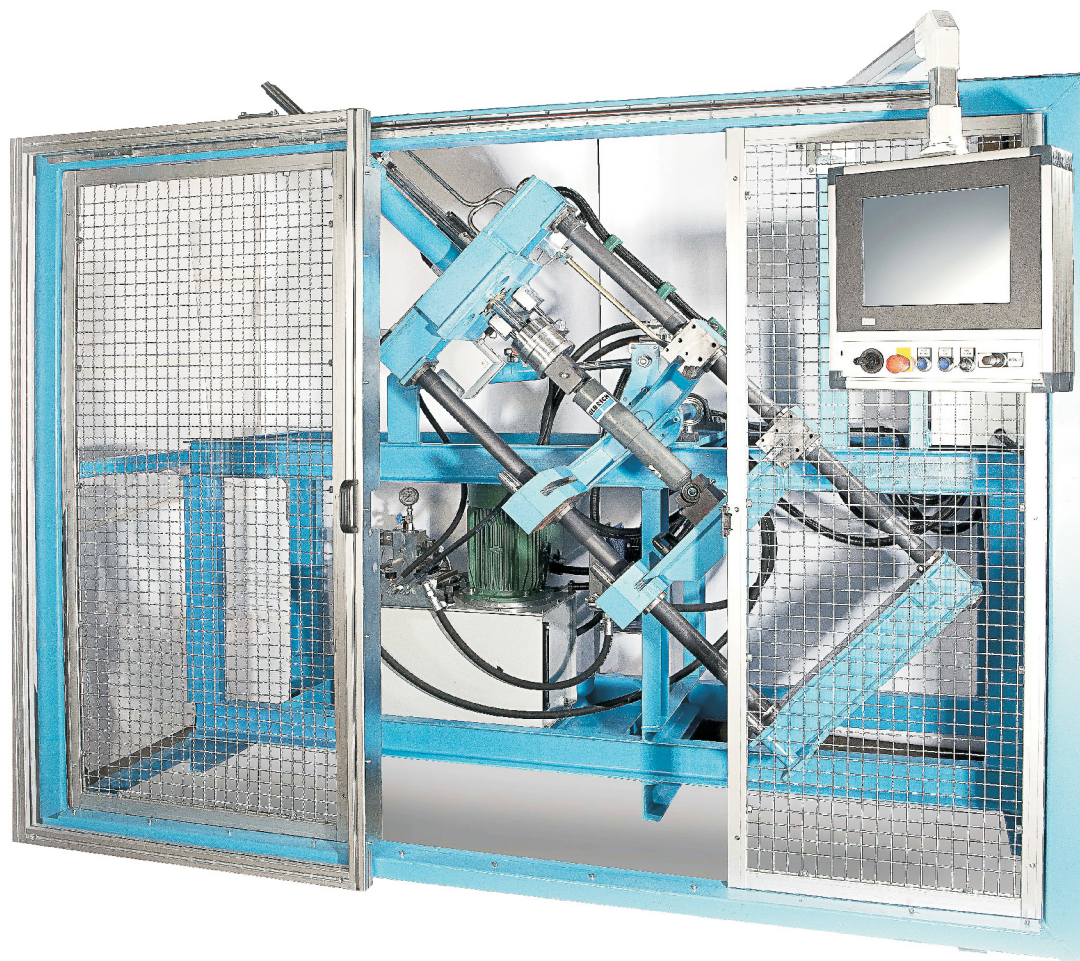


Test Machines

Universal Shock-absorber & Spring Tester



	Operation as Shock-absorber Test Machine	Operation as Spring Tester
Max. Extension and Compression Force:	25kN	45kN
Max. Stroke:	360mm relates to +180mm from the central position	360mm
Max. Speed:	During cyclical load sequence: 300mm/ s.	During application of Max. load 40mm/ s.
Test position (axis) :	From 0° to 120° stepless continual drive positioning	Usual mode = vertical. (90°)
Max. diameter of test object	440mm	440mm
Power	7,5kW	7,5kW

Additional function: functional characteristic curve for parabolic springs, analysis and saving of test protocol.

Where shock absorbers are mounted, springs are often not far away and as it is common practice to test these components at more or less the same time. Hence, the Ulbrich shock absorber and spring tester test machine offers an excellent way to combine these test procedures.

The main criteria for testing coil and parabolic springs are the analysis of the force distance curve. The specified test force, test position, velocities and other criteria can be freely selected according to the type of spring to be tested.

From the resulting data the spring's properties can be determined. By using freely selected points of measurement, special customer specific analyses can be carried out.

The actual evaluation of the test data is completed automatically at the end of every test cycle. The results are displayed on the control screen in a test protocol format.

The result I.O. or N.I.O. is shown clearly. The protocol can include several test cycles or be in the form of one protocol per spring, these protocols can be printed immediately for the test record files or printed at a later point in time.

Brief description of test cycle:

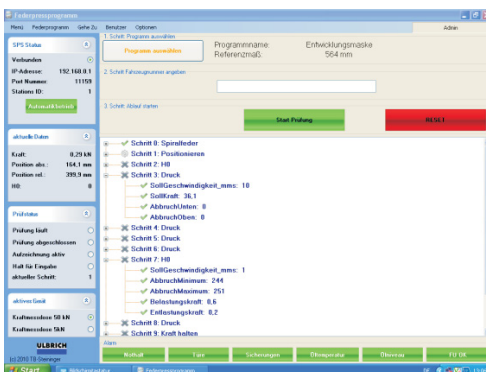
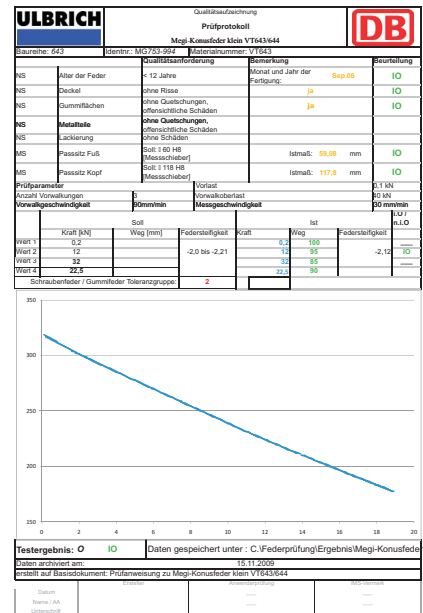
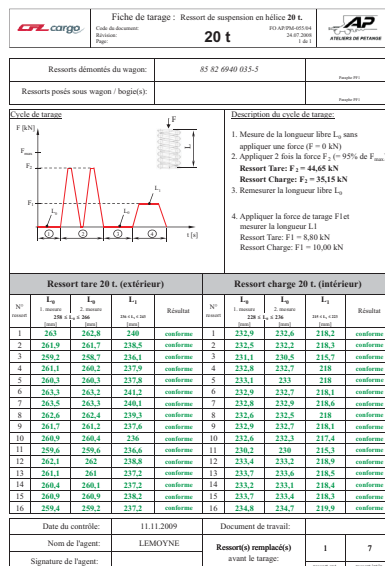
In order to test springs the holding fixture for the relevant spring should be ready to for test object. The operator should then fit the spring to the fixture, the spring and holding fixture are then moved into the test position inside the test rig. The corresponding programme is then called up from the test software; once the test rig safety door is closed, then the operator can start the test cycle.

The test cycle runs fully automatically. The cycle itself can include a number of individual steps, for example cylinder position and the measurement of the actual spring height before applying the test force,

- pre-loading, positional cycles, under pre-programmed force with specific holding times at those chosen positions. Similarly the operator also has the chance to adjust speeds accordingly. Once the press cycle has been completed, the press transmits all data to the super ordinate system which then completes the appropriate protocol for the specific test programme carried out. The test protocol format can be individually selected and modified by the technical staff who have written the programme. All data is collated and saved using Microsoft compatible software which allows the Engineering team to extract and use the data using other computers and different software. The possibility to create PDF documents automatically for printing and filing, or indeed to save directly on the test centres main server and database management system is also standard practice.

Main control and software features

- Display shows "set" Vs. "actual" values for Press force / spring height
- The press cycle is shown in continual steps on the screen
- A force / distance diagram can be graphically displayed
- I.O. / N.I.O. indicator
- Operator information recorded, i.e. name of operator, contract No. serial No. of wheel set, other relevant data can be individually chosen and recorded
- Clear overview of all relevant test data and test parameters on user friendly control screen
- Test results, operator name, time of test, programme parameter etc are automatically saved in the PC's databank in protocol format and are accessible for future use
- Test diagram graphically displayed
- Option : connection to printer for Labelling springs
- Option : Statistical evaluation module can be ordered in addition
- Note taking module available



à compléter par PM23 -> P1 pour compléter le numéro de wagon ou bogie(s) et graphie -> P11.1 pour archiver